

S/N TO BE ASSIGNED

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: VERKAMA Serial No.: TO BE ASSIGNED
Filed: 17 APRIL 2001 Docket No.: 781.395USW1
Title: MECHANISM FOR NETWORK-INITIATED INFORMATION TRANSFER

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By: 

Name: Kari Arnold

PRELIMINARY AMENDMENT

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Please enter the following preliminary amendment into the above-referenced application.

ABSTRACT

Please insert the attached abstract into the application as the last page thereof.

CLAIMS

Please amend claims 5-8 as follows. A clean copy of the entire set of claims is included below. A marked up copy of the amended claims is included in Appendix A.

1. A method for transferring information, such as a new service, or at least information about the new service, by a server (14) to a mobile terminal (MS) in a predetermined area of a packet-switched network (HPLMN, VPLMN) comprising a plurality of support nodes (SGSN, GGSN);

characterized by the steps of

associating at least one identifier (IMSI) of the mobile terminal (MS) with a Packet Data Protocol address, or PDP address of the same mobile terminal;
operationally connecting the server (14) and all support nodes (SGSN, GGSN) in said predetermined area to an intelligent network node (SCP);
informing (2-6) the intelligent network node (SCP) about the identifier (IMSI) and the current PDP address of the mobile terminal (MS); and
using the PDP address stored in the intelligent network node (SCP) for routing (2-10 ... 2-14) said information to the mobile terminal (MS).

2. A method according to claim 1, characterized in that the using step comprises the following steps:

before transferring said information to the mobile terminal (MS), the server (14) sends to the intelligent network node (SCP) an inquiry (2-10) requesting the PDP address of the mobile terminal (MS); and

in response to the inquiry (2-10), the intelligent network node (SCP) sends to the server (14) the PDP address of the mobile terminal (MS);

whereby the server (14) is able to communicate (2-14) with the mobile terminal (MS) using the PDP address indicated by the intelligent network node (SCP).

3. A method according to claim 1, characterized in that the using step comprises the following steps:

the server (14) sends (2-10') the information to the intelligent network node (SCP); and

the intelligent network node (SCP) sends (2-12') said information to the mobile terminal (MS) without disclosing the mobile terminal's PDP address to the server (14).

4. A method according to claim 1, characterized in that the using step comprises the following steps:

the intelligent network node (SCP) stores, in addition to the PDP address, an address of at least one server (14); and

upon receiving the current PDP address of the mobile terminal (MS), the intelligent network node (SCP) sends the current PDP address to said at least one server (14);

whereby the server (14) is able to communicate with the mobile terminal (MS) without a separate inquiry.

5. (Amended) A method according to claim 1, characterized in that the address of the intelligent network node (SCP) is stored with the subscription data related to the mobile terminal (MS).

6. (Amended) A method according to claim 1, characterized in that the step of informing the intelligent network node (SCP) is responsive to a detected establishment and/or change in the PDP address.

7. (Amended) A method according to claim 1, characterized in that the step of informing the intelligent network node (SCP) is performed by a Serving GPRS Support Node (SGSN) having Service Switching Point (SSP) functionality.

8. (Amended) A method according to claim 1, characterized in that said packet-switched network (HPLMN, VPLMN) communicates with said mobile terminal (MS) over a radio interface.

9. A Service Control Point (SCP), characterized in that,

for transferring information, such as a new service, or at least information about the new service, by a server (14) to a mobile terminal (MS) having at least one identifier (IMSI) and a PDP address, in a packet-switched network (HPLMN, VPLMN) comprising a plurality of support nodes (SGSN, GGSN), the Service Control Point (SCP) is

operationally connected to the packet-switched network (HPLMN, VPLMN) and the server (14);

adapted to store said at least one identifier (IMSI) and the PDP address of the mobile terminal (MS) in response to a first message (2-6) originating from the packet-switched network; and

adapted to support said transferring of information by a server (14).

10. A Service Control Point (SCP) according to claim 9, characterized in that the Service Control Point (SCP) is adapted to receive a second message (2-10) from the server (14) and to respond to the second message (2-10) by sending (2-12) to the server (14) the PDP address of the mobile terminal (MS).

11. A Service Control Point (SCP) according to claim 9, characterized in that the Service Control Point (SCP) is adapted to receive from the server (14) a second message (2-10') comprising said information, and to respond to the second message by sending (2-12') said information to the mobile terminal (MS).

12. A Service Control Point (SCP) according to claim 9, characterized in that the Service Control Point (SCP) is adapted

to store, in addition to the PDP address, an address of at least one server (14); and

upon receiving the current PDP address of the mobile terminal (MS), to send the current PDP address to said at least one server (14).

13. A server (14) for providing a new service or at least information about the new service to a mobile terminal (MS) having a Packet Data Protocol address, or PDP address, in a packet-switched network comprising a plurality of support nodes (SGSN, GGSN), wherein each support node has a respective address;

characterized in that the server (14):

is operationally connected to a Service Control Point (SCP) of an intelligent network;

is adapted to use the PDP address of the mobile terminal (MS) stored in the Service Control Point (SCP) for providing the mobile terminal (MS) with a new service or information about it.

14. A server according to claim 13, characterized by being adapted to send to the Service Control Point (SCP) an inquiry (2-10) about the PDP address of the mobile terminal (MS) before providing (2-12) the mobile terminal (MS) with a new service or information about it.

15. A server according to claim 13, characterized by being adapted to send (2-10') the new service or at least information about it to the Service Control Point (SCP) to be forwarded to the mobile terminal (MS).

16. A server according to claim 13, characterized by being adapted to send the new service, or at least information about it, to the mobile terminal (MS) using the current PDP address of the mobile terminal (MS) received from the Service Control Point (SCP).

17. Use of a Service Control Point (SCP) of an intelligent network for transferring information, such as a new service or at least information about it to a mobile terminal (MS) via a packet-switched network (HPLMN, VPLMN), wherein transferring said information is initiated by an element (14) other than the mobile terminal (MS).

REMARKS

The above preliminary amendment is made to insert an abstract page into the application and to remove multiple dependencies from claims 5-8.

Applicant respectfully requests that this preliminary amendment be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.

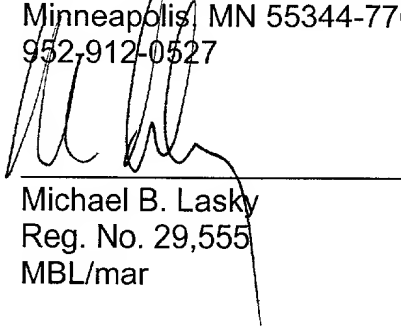
If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Michael B. Lasky at 952.912.0527.

Respectfully submitted,

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Date: 17 April 2001

By:



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Appendix A
Marked Up Version of the Amended Claims

1. A method for transferring information, such as a new service, or at least information about the new service, by a server (14) to a mobile terminal (MS) in a predetermined area of a packet-switched network (HPLMN, VPLMN) comprising a plurality of support nodes (SGSN, GGSN);

c h a r a c t e r i z e d by the steps of

associating at least one identifier (IMSI) of the mobile terminal (MS) with a Packet Data Protocol address, or PDP address of the same mobile terminal;

operationally connecting the server (14) and all support nodes (SGSN, GGSN) in said predetermined area to an intelligent network node (SCP);

informing (2-6) the intelligent network node (SCP) about the identifier (IMSI) and the current PDP address of the mobile terminal (MS); and

using the PDP address stored in the intelligent network node (SCP) for routing (2-10 ... 2-14) said information to the mobile terminal (MS).

2. A method according to claim 1, c h a r a c t e r i z e d in that the using step comprises the following steps:

before transferring said information to the mobile terminal (MS), the server (14) sends to the intelligent network node (SCP) an inquiry (2-10) requesting the PDP address of the mobile terminal (MS); and

in response to the inquiry (2-10), the intelligent network node (SCP) sends to the server (14) the PDP address of the mobile terminal (MS);

whereby the server (14) is able to communicate (2-14) with the mobile terminal (MS) using the PDP address indicated by the intelligent network node (SCP).

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3. A method according to claim 1, characterized in that the using step comprises the following steps:

the server (14) sends (2-10') the information to the intelligent network node (SCP); and

the intelligent network node (SCP) sends (2-12') said information to the mobile terminal (MS) without disclosing the mobile terminal's PDP address to the server (14).

4. A method according to claim 1, characterized in that the using step comprises the following steps:

the intelligent network node (SCP) stores, in addition to the PDP address, an address of at least one server (14); and

upon receiving the current PDP address of the mobile terminal (MS), the intelligent network node (SCP) sends the current PDP address to said at least one server (14);

whereby the server (14) is able to communicate with the mobile terminal (MS) without a separate inquiry.

5. (Amended) A method according to [any one of the preceding] claim[s] 1, characterized in that the address of the intelligent network node (SCP) is stored with the subscription data related to the mobile terminal (MS).

6. (Amended) A method according to [any one of the preceding] claim[s] 1, characterized in that the step of informing the intelligent network node (SCP) is responsive to a detected establishment and/or change in the PDP address.

7. (Amended) A method according to [any one of the preceding] claim[s] 1, characterized in that the step of informing the intelligent network node (SCP)

is performed by a Serving GPRS Support Node (SGSN) having Service Switching Point (SSP) functionality.

8. (Amended) A method according to [any one of the preceding] claim[s] 1, characterized in that said packet-switched network (HPLMN, VPLMN) communicates with said mobile terminal (MS) over a radio interface.

9. A Service Control Point (SCP), characterized in that, for transferring information, such as a new service, or at least information about the new service, by a server (14) to a mobile terminal (MS) having at least one identifier (IMSI) and a PDP address, in a packet-switched network (HPLMN, VPLMN) comprising a plurality of support nodes (SGSN, GGSN), the Service Control Point (SCP) is

operationally connected to the packet-switched network (HPLMN, VPLMN) and the server (14);

adapted to store said at least one identifier (IMSI) and the PDP address of the mobile terminal (MS) in response to a first message (2-6) originating from the packet-switched network; and

adapted to support said transferring of information by a server (14).

10. A Service Control Point (SCP) according to claim 9, characterized in that the Service Control Point (SCP) is adapted to receive a second message (2-10) from the server (14) and to respond to the second message (2-10) by sending (2-12) to the server (14) the PDP address of the mobile terminal (MS).

11. A Service Control Point (SCP) according to claim 9, characterized in that the Service Control Point (SCP) is adapted to receive from the server (14) a

second message (2-10') comprising said information, and to respond to the second message by sending (2-12') said information to the mobile terminal (MS).

12. A Service Control Point (SCP) according to claim 9, characterized in that the Service Control Point (SCP) is adapted

to store, in addition to the PDP address, an address of at least one server (14);
and

upon receiving the current PDP address of the mobile terminal (MS), to send the current PDP address to said at least one server (14).

13. A server (14) for providing a new service or at least information about the new service to a mobile terminal (MS) having a Packet Data Protocol address, or PDP address, in a packet-switched network comprising a plurality of support nodes (SGSN, GGSN), wherein each support node has a respective address;

characterized in that the server (14):

is operationally connected to a Service Control Point (SCP) of an intelligent network;

is adapted to use the PDP address of the mobile terminal (MS) stored in the Service Control Point (SCP) for providing the mobile terminal (MS) with a new service or information about it.

14. A server according to claim 13, characterized by being adapted to send to the Service Control Point (SCP) an inquiry (2-10) about the PDP address of the mobile terminal (MS) before providing (2-12) the mobile terminal (MS) with a new service or information about it.

15. A server according to claim 13, characterized by being adapted to send (2-10') the new service or at least information about it to the Service Control Point (SCP) to be forwarded to the mobile terminal (MS).

16. A server according to claim 13, characterized by being adapted to send the new service, or at least information about it, to the mobile terminal (MS) using the current PDP address of the mobile terminal (MS) received from the Service Control Point (SCP).

17. Use of a Service Control Point (SCP) of an intelligent network for transferring information, such as a new service or at least information about it to a mobile terminal (MS) via a packet-switched network (HPLMN, VPLMN), wherein transferring said information is initiated by an element (14) other than the mobile terminal (MS).